Remarks

Claims 1-5, 11-21 and 28-47 are pending in the application, with claims 29-47 being previously withdrawn from consideration. The Applicant respectfully requests reconsideration of the application in view of the amendments and the following remarks.

Amended Drawings filed March 16, 2004

Amendments to the Drawings (and corresponding Replacement Sheets) were made in the Applicant's previous response filed March 16, 2004. The Applicant respectfully requests the Examiner indicate whether the drawing amendments are accepted or objected in the next Office communication.

Related divisional application issued as US 7,006,276

The Applicant wishes to bring to the Examiner's attention that Application No. 10/959,496, which is a divisional of the instant application, has issued as US 7,006,276.

Rejections under 35 U.S.C. § 102 and 103

Claims 1-4, 11-18 and 28 are rejected under 35 U.S.C. 102(b) as being anticipated by Yokoyama et al (EP 0 831 352 A1). **Claims 5 and 19-21** are rejected under 35 U.S.C. 103(a) as being unpatentable over Yokoyama and further in view of Roberson et al (US 6,137,623).

Claim 16 as presently amended expressly recites (emphasis added):

A microelectrical mechanical optical display engine, comprising:
a microlens array having an array of plural lenslets for receiving and directing illumination light;

an aperture plate through which plural pixel apertures extend, the plural pixel apertures being aligned with and to receive illumination light from the plural lenslets of the microlens array; and

a microelectrical mechanical reflector array positioned opposite the aperture plate from the microlens array, the microelectrical mechanical reflector array including plural microelectrical mechanical actuators that support reflectors in alignment with the plural pixel apertures to receive and reflect the illumination light, the plural microelectrical mechanical actuators being constructed and arranged to orient the reflectors selectively to direct the illumination light back through the pixel apertures or against the aperture plate, wherein a microelectrical mechanical actuator is placed in an actuated state having an actuated position by an actuation voltage and held in a storage state to maintain the actuated position by a storage voltage, wherein the storage voltage is less than the actuation voltage.

No new matter has been added; the Examiner's attention is directed to at least page 12, lines 20-25, and page 13, lines 3-17, of the specification as originally filed.

Yokoyama is directed to an optical modulating device. Yokoyama discloses a mirror element having a piezoelectric layer sandwiched between electrode layers (col. 12, lines 56-58). The voltage applied to the electrode layers causes the mirror element to deform in a curvature to reflect light (col. 13, lines 1-5). The applied voltage is used to control the curvature of the mirror elements (col. 13, lines 7-11). Such mirror elements may be used in a display unit 205 (Figs. 21 and 22; col. 30, line 47, to col. 32, line 34). However, Yokoyama fails to disclose *"wherein a microelectrical mechanical actuator is placed in an actuated state having an actuated position by an actuation voltage and held in a storage state to maintain the actuated position by a storage voltage, wherein the storage voltage is less than the actuation voltage"* as expressly claimed by the Applicant.

It is noted that Roberson also fails to disclose *"wherein a microelectrical mechanical actuator is placed in an actuated state having an actuated position by an actuation voltage and held in a storage state to maintain the actuated position by a storage voltage, wherein the storage voltage is less than the actuation voltage"* as expressly claimed by the Applicant. Roberson discloses actuation of electrostatic plates 12 for attenuating a reflected radiation signal (Figs. 2A and 2B; col. 7, lines 18-25).

Applying a voltage to lower electrode 32 draws plate member 30 toward lower electrode 32 such that plate member 30 is flat (col. 8, lines 16-20). Roberson also discloses that plates 12 may be actuated thermally (col. 8, line 43) or electromagnetically (col. 8, line 58). Also, individual plates may be partially actuated (Fig. 5; col. 9, lines 61-67). However, Roberson fails to disclose *"wherein a microelectrical mechanical actuator is placed in an actuated state having an actuated position by an actuation voltage and held in a storage state to maintain the actuated position by a storage voltage, wherein the storage voltage is less than the actuation voltage"* as expressly claimed by the Applicant.

Thus, Yokoyama and Roberson, whether taken singularly or in combination, fail to disclose at least one of the expressly recited limitations of claim 16. Accordingly, claim 16 is not anticipated nor rendered obvious by the cited references. Claims 1-5, 11-15, 17-21 and 28 are dependent claims and distinguish for at least the same reasons as independent claim 16 in addition to adding further limitations of their own. Therefore, the Applicant respectfully requests that the instant § 102 and § 103 rejections be withdrawn.

New claims 48-53

The Applicant submits that new claims 48-53 are patentable based on their dependency from allowable independent claim 16. No new matter has been added; the Examiner's attention is directed to at least Figures 21-22 and corresponding descriptions in the specification as originally filed.

Conclusion

Accordingly, in view of the above amendment and remarks it is submitted that the claims are patentably distinct over the prior art and that all the rejections to the claims have been overcome. Reconsideration and reexamination of the above Application is

requested. Based on the foregoing, Applicant respectfully requests that the pending claims be allowed, and that a timely Notice of Allowance be issued in this case. If the Examiner believes, after this amendment, that the application is not in condition for allowance, the Examiner is requested to call the Applicant's attorney at the telephone number listed below.

If this response is not considered timely filed and if a request for an extension of time is otherwise absent, Applicant hereby requests any necessary extension of time. If there is a fee occasioned by this response, including an extension fee that is not covered by an enclosed check please charge any deficiency to Deposit Account No. 50-0463.

Respectfully submitted,
Microsoft Corporation

Date: February 27, 2007

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/Kate Marochkina/
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Kate Marochkina
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